

# POULTRY FACTS



## SCRAPS GOOD FOR CHICKENS

Parings Left From Potatoes, Pumpkins, Squash, Apples, Etc., Make Excellent Feed.

Save all the parings, potato, pumpkin, squash, apple, etc., and when you are cooking your noonday meal cook these for the chickens. When it has cooled, stir in enough wheat bran to make a stiff mash. This makes an excellent but economical dinner. Give them an occasional mess of parings chopped fine without cooking. Turnips and beets are much relished by the fowls when eaten green.

If you have cabbage, take a small-sized head, fasten it to a wire and hang low enough that the fowls can reach it easily. You will be surprised to see how quickly they will clean up a cabbage in this way.

Don't feed your fowls milk in the watering trough. Have a separate trough for each. Be sure to feed a panful of milk each day.

Don't forget to water fowls when the weather gets cold. Milk doesn't quench their thirst, as I have often seen them turn from a pan of milk to the watering trough and drink an enormous quantity.

Keep a dust box in the henhouse when the hens are confined.

## MOST PROLIFIC EGG LAYERS

What Chinese Breed of Geese Lack in Size They Make Up in Egg Production—Are Quite Hardy.

Apparently what the Chinese geese lack in size has prevented them from becoming favorites with those who raise large numbers annually, but with those who keep a limited number



White Chinese Geese.

they are found to be very practical. What they lack in size they gain in egg production, being the most prolific of all breeds of geese, averaging from 50 to 60 eggs a year. In size, aptitude to fatten, and ease of management they appear in no respect inferior to other geese, while the quality of flesh is decidedly superior.

They are exceedingly graceful in appearance, quite hardy, and the young mature early. There are two varieties of Chinese geese—the Brown and the White. They have medium-sized heads, with large knob at base of a medium-length bill, and long, gracefully arched neck. The backs are medium in length, and the breast is round and full; body of medium size, round and plump; wings large and strong; thigh bones short and stout, and shanks of medium length.

## EXERCISE FOR LAYING HENS

Erroneous Impression Prevails Among Certain Poultrymen That Fowls Should Be Kept Moving.

The matter of exercise for laying hens is one of great importance to the breeder, and one which means much to the man who is producing eggs for the market only. There is a common impression prevailing among certain unenlightened poultrymen that fowls should be kept on the move all day long, but this is extremely erroneous, especially in the case of winter egg production, and it has been proved most conclusively that a fowl will lay more eggs at a lower cost when not required to take an excessive amount of exercise.

### Chickens to Fatten.

Chickens of from three and one-half to four and one-half pounds are the most profitable to put in the fattening crates. Two parts oats, one part buckwheat and one part corn, all finely ground, mixed with sufficient buttermilk to make a batter, makes an excellent ration for crate feeding. With suitable birds an increase of one pound may be expected from three to five pounds of meal feed.

### Make-Up of High Producer.

The bird that is a high producer must have a vigorous appetite and a large capacity for converting food materials into eggs.

# Highway Improvement

## COST OF ROAD CONSTRUCTION

Much Depends on Amount and Character of Grading Necessary—Other Factors Considered.

(Prepared by the United States Department of Agriculture.)

The cost of a road is dependent upon not only the type of construction, but the amount and character of grading to be done, the cost of labor and materials, the width and thickness of surfacing, the character and amount of drainage required, and other factors of equal variability. Based upon general averages, it has been ascertained by highway specialists of the United States department of agriculture that under average conditions macadam roads can be built in southern states at from \$4,000 to \$5,000 per mile, gravel roads at from \$1,500 to \$2,500 per mile, and sand-clay and top-soil roads at from \$800 to \$1,500 per mile. In New England and the other eastern states, macadam roads are reported at from \$6,000 to \$9,000 per mile, gravel roads at from \$3,200 to \$5,000, and bituminous macadam from \$8,000 to \$13,000, according to the character of construction, whether surface-treated, penetration, or mixing method. The bituminous type is quite general in the eastern states. As indicating costs in other sections of country, the state highway commissioner of Michigan reported in 1913 the average cost for macadam roads \$4,300 per mile, clay-gravel roads \$1,500 per mile, and concrete roads about \$10,000 per mile. The average cost of



Improved Michigan Road.

state highways constructed in Ohio in 1913 was \$3,383. According to types in 1912, the brick-paved highways averaged \$14,650 per mile and the macadam highways \$5,950. In California the first 356 miles of the state system of highways cost an average of \$8,143 per mile and consisted principally of thin concrete with a thin coat of bitumen. The maximum and minimum figures given in this paragraph are not absolute, but are intended to present the usual range of costs. The rates given include grading, drainage, surfacing, and engineering costs.

## BOOSTER FOR BETTER ROADS

Cost of Transportation of Produce to Market is Lessened—Ditch, Drain and Drag Roads.

Good roads not only cheapen the cost of transporting farm produce to market, but make the country a desirable place to live in.

We hear much talk about federal aid for good roads, yet if we wait for this movement to crystallize into a reality, the people of the country will be riding in mud for some time to come. The thing to do is to take off coats and buckle into a plan for local road improvement. Be a booster for the grading of roads and follow up the work with the King road drag for maintenance.

The principle of all good roads in all States is the same, viz., keeping the water out and off of the roadbeds. Ditch, drain and drag the roads. This is the tripod of good road building.

## ADVANTAGES OF GOOD ROADS

Scarcely Secondary to Rail Transportation in Their Far-Reaching Effect on Civilization.

The two great necessities of modern life are education and transportation, for civilization travels in the wake of good schools and good roads. Good roads lead in more good directions than the most far-seeing can contemplate. Commerce begins on the country roads and byways; they affect school attendance and literacy; they control markets and prices, values of land, the development and contentment of the people, the cost and pleasure of living, and are scarcely secondary to rail transportation in their far-reaching effect. They determine the character and growth of the community, and the necessity for them cannot be overestimated, for a country that isn't worth a good road isn't worth living in.

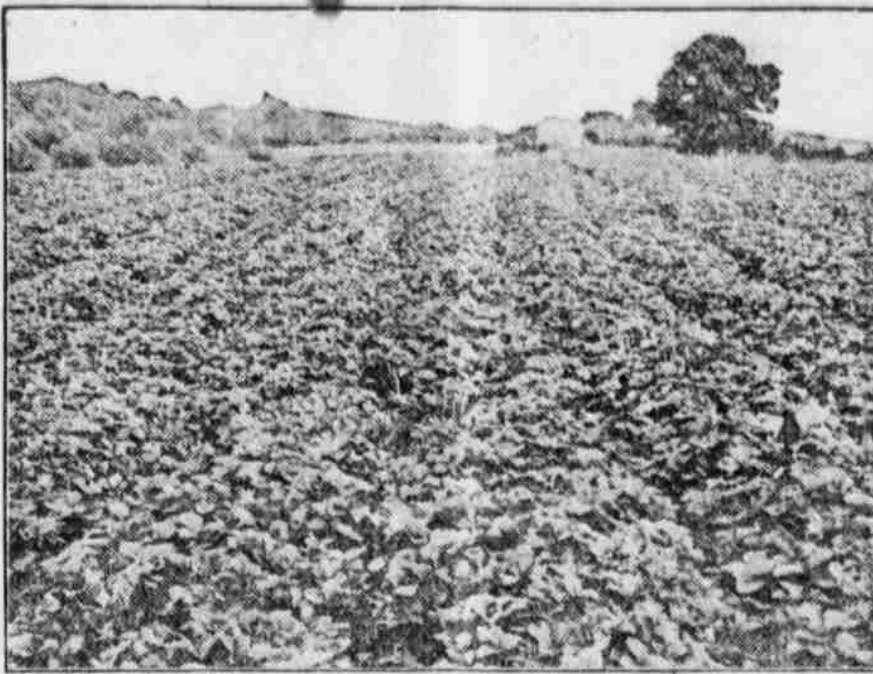
### Idaho Boosts Good Roads.

The Southern Idaho Motor association was perfected at Boise, Idaho, for the purpose of making a good roads campaign in southern Idaho. This marks an important step toward giving impetus to the good roads movement in the state.

### Keep Weeds Down.

It does not take long to mow the growth along the roadside, ditch banks and fence rows. You could do it going to and from the fields oftentimes, or when you have an hour to spare.

## WINTER MULCH GOOD FOR STRAWBERRIES



Many Berries Result From the Matted Row System, but the Berries Are Small and Do Not Ripen as Well as When They Obtain More Sunlight.

(By M. N. EDGERTON.)

In a sense the strawberry plant is an evergreen. Unlike the bush or tree fruits, it has no wood growth to ripen. Its leaves do not shrivel in the fall, and at the touch of frost drop from the plant, hence it is but reasonable to suppose that the plant will have further need of them at some future time.

Observing closely, the student of nature will note that in place of ripening, as is the case with bush and tree fruits, the leaves of the strawberry plant take on a deeper shade of green with the advent of autumn, finally assuming a recumbent position. This is nature's method of preparing this plant for the necessary period of dormancy.

During this period the forces in the plant remain inactive. With the coming of spring, the warm breezes, sunshine and showers, there is an awakening—a springing up of new life.

With the bush and tree fruits this awakening of pent-up energy first manifests itself by the swelling of buds. From these tiny leaves push forth, to be followed by the unfolding and development of blossoms.

In embryonic form, leaf and blossom have been tucked away and protected in a sheath of well-ripened woody growth.

These stored-up forces are protected against injury from low temperature up to a certain point, depending somewhat on atmospheric conditions prevailing at the time and conditions under which the growth and ripening of these buds took place.

However, with strawberry plants there is no swelling and unfolding of leaf buds, for each leaf and cluster of blossoms appears separately and at different periods of time.

In place of well-ripened, woody tissue, the embryonic leaves and fruit stems of this plant are protected by the crown of the plant, which consists of a succulent growth of plant tissue only.

With such a protection, these embryonic leaves and fruit buds are not fully prepared to undergo the rigors of winter, hence additional protection is required if the plants are to retain their strength and vigor unimpaired. By looking into the matter closely the reason for this may be very plainly seen.

I have said that the leaves of the strawberry plant go into winter in a green, succulent state, and for this reason their purpose has not yet been fully accomplished.

With the advent of spring, and the awakening of nature, these leaves resume activities.

The root feeders gather in the elements of plant food from the soil. The circulatory system carries this food to leaf tissues, where, under the action of sunshine, a chemical change takes place, by which it is made available for assimilation.

Some of this perfect plant food is used by these same leaf tissues, but by far the larger portion is carried to the crown, there to be used in the growth and development of a new and larger leaf system.

This being true, it will readily be seen that if the leaves of the present season's growth do not pass through the winter with vitality unimpaired an abnormal condition in plant life will result.

With its tissues wholly or partly dead, the leaves of the plant are unable to resume the functional activities properly, as would otherwise be the case.

New leaves may push out from the crown of such plants, to be sure, but such growth never possesses that vigorous, healthy appearance so characteristic of normally constituted plants.

Nor are the leaves the only part of the plant that sustains injury through exposure to winter frosts and sunshine, for the tissues that compose the crown are injured more or less by the same thawing and freezing process.

In addition to the injury to the leaf and crown, as noted, there is, on some soils, injury done to the root system through the lifting, heaving action of frosts.

Grown on a class of soils that honeycomb readily, these surface-feeding plants are often stranded, so to speak, their crowns projecting more or less above the surface of the ground, many of the fine feeding roots having been broken in the process.

The contest with the elements over the plants in the unprotected

strawberry bed will present every degree of vitality except that of a plant in perfect health.

The plants of an unprotected strawberry bed will make as brave a showing as their impaired vitality will permit, but results as measured by the harvest will be very disappointing when compared with those secured from a bed of plants that have been given the proper protection.

The remedy then, or preventive rather, is the winter mulch.

What shall we use, and when best applied? In our own work any material that is convenient is made to serve the purpose, and the mulching operations are begun as soon as freezing weather sets in.

Whether the material used is straw, marsh hay, cornstalks, or forest leaves, good results will be secured if properly applied.

The quantity that should be applied varies somewhat. In one article that I read not long since a writer recommended eight inches of settled straw.

There are conditions under which a mulch of that depth would mean disastrous results. In our opinion, one inch of the settled straw will afford ample protection in most instances. If the ground is frozen hard at the time, a thick mulch may be applied with safety, but the placing of several inches of straw or other material over plants when the ground is in an unfrozen condition is almost sure to result disastrously.

The finer the material the finer it will settle, and consequently the greater the harm likely to be done. The coarser the material used the better, for then there is sufficient circulation of air to supply the needs of the plant, yet the sunlight is excluded.

I have received reports from growers, in which it was claimed that a mulch had proved ruinous to strawberry plants. However, if the entire circumstances relating to such instances were fully known, I am confident it would be found that either improper material had been used or improperly applied, perhaps both.

The straw or chaff should be used sparingly, an amount sufficient to exclude the direct rays of light only.

A blanket of snow makes the very best sort of protection, as it permits the free circulation of air, even when it packs in a hard drift several feet in thickness.

This being true, it is a wise plan, whenever possible, to establish the strawberry bed where it will have the benefit of a windbreak of some sort.

In latitudes where there are large snowfalls, it will even pay to erect an artificial windbreak of some sort, if needed, to prevent the winds sweeping the ground bare of snow.

In our latitude, a light covering of straw answers every purpose required for the winter mulch, as this is always supplemented by a snow blanket, making an ideal combination.

It is not generally thought that excessive freezing of the ground is injurious to the plants, yet we have always had the best results when the ground has been held unfrozen throughout the entire period of plant dormancy.

It seems strange to me now that so many strawberry growers have their beds without protection, thereby discounting largely the results due at harvest.

Yet it is not so very strange after all. Many of us go through life with the mind's eye half closed to the things about it. It took several years of costly experience to convince the writer that the winter mulch is an important factor in strawberry growing and that the work must on no account be neglected if the most highly satisfactory results are to be obtained.

### Keep the Animals Warm.

If the animals on the farm possessed the power of speech, they would doubtless cry out for warm beds and good shelter, even at the expense of part of their rations of roughage. While a bellyful of food will help, it will not make comfortable the animal that stands shivering from the night through, unprotected from the weather.

### Raise Score of Butter.

If you want to raise the score of your butter and also the price you receive per pound for it, get the separator out of the barn. You can get cow odors and cow flavor enough without going after it.

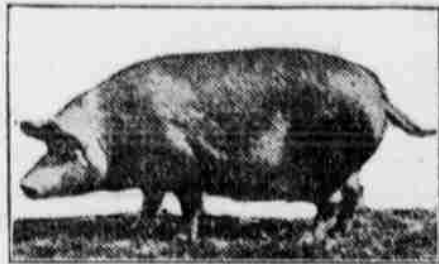
# FARM STOCK

## ARE FALL PIGS ADVISABLE?

One Farmer Adopts Plan of Raising Two Litters Yearly, Thereby Keeping Brood Sow Busy.

It is a question with many farmers whether it is advisable to raise fall pigs. It is our practice, writes a farmer in an exchange, to raise fall pigs, two litters a year as near as possible. We would abandon the fall pig entirely if we had to keep him until one year old before putting him on the market. We do not feel we can afford to keep a brood sow for raising only one litter a year, and we have fallen on the plan of growing two litters to keep the sows continually at work.

Spring-farrowed pigs we do not keep, as a rule, longer than eight



A Tamworth Sow.

months old. This puts them off the farm by the time the fall pigs need extra care. Up to this time they have been fed principally through the dam. When about ready to leave the dam we begin to give them a slop ration, which we keep up until they go to market. We begin feeding corn—small quantities at first—as soon as they have been weaned. The slops consist principally of skim milk, and right here we want to say there is nothing that compares with skim milk as an accompaniment to corn for the growing pigs. When there is no skim milk to be had we have used wheat middlings scalded in hot water with fair results.

## ATTENTION TO COLT'S FEET

Great Danger in Allowing Hoofs of Young Animal to Grow Too Long—Avoid Trouble Later.

It has often been said that a horse's feet are the most important parts of its body; and anybody who has had experience with lameness and inability of horses to do a reasonable amount of work because of lameness of one kind or another, will readily acknowledge the importance of properly caring for the feet of the equine stock on the farm.

Proper care of the horse's feet means that attention must be given when he is a colt. In fact, if the horseman or farmer carelessly allows the colt's hoofs to grow long and uneven, there is a great deal more danger of injuring the feet or deforming them than if the same carelessness is practiced with mature animals. The bones, ligaments and tendons of the colt's feet are not so hard nor so strong as those of the mature horse, and the result is that improper standing, induced by poorly shaped hoofs, throws the bones and ligaments out of their natural positions. Again, it may be a case of where the colt's legs are crooked at birth, and in such instances care and attention to trimming the hoofs may be of considerable help in straightening the legs.

In handling the colt's feet it is best to begin with the front ones. Teach the colt to rest his weight on the opposite foot, rather than the one which is being held, by shoving it enough to throw the balance over on the opposite foot at the same time the other foot is picked up. The proper learning of this lesson will often save considerable trouble later when the colt must be shod.

After the colt's feet have been picked up in this manner a few times his hoofs can be trimmed with but very little trouble. Give this matter attention and often the colt will come out with a good set of legs, when it otherwise would be greatly hampered at work or on the market by crooked and weak "under-pinning."

## SPREADING OF HOG CHOLERA

Important That Owners of Healthy Animals Keep Away From Farms Where Disease Exists.

Doctor Koen, the United States government inspector in charge of the hog cholera in Dallas county, Iowa, reports that 29.6 per cent of all cases of hog cholera were caused by the germs being carried from one farm to another by farmers exchanging work or visiting each other. It is important, therefore, that owners of healthy hogs keep strictly away from farms where the disease exists and should keep other people away from his own hog lots and pastures.

By using disinfectant freely on horses and wagons which have been in the neighborhood of the disease and by requiring everyone who comes on the farm or goes near the hog lot to disinfect his feet, the spread of the disease can be very greatly reduced.

# A Loyal Ally In Stomach Ailments

As soon as you notice the appetite waning, the digestion becoming impaired or the liver and bowels refuse to perform their daily functions just resort to

## HOSTETTER'S Stomach Bitters

It is really Nature's "first aid"

Explained. "I'll say one thing for Diggs. He never gets a swelled head." "That's true. Solid bones doesn't swell very easily."

## DON'T MIND PIMPLES

Cuticura Soap and Ointment Will Banish Them. Trial Free.

These fragrant supercreamy emollients do so much to cleanse, purify and beautify the skin, scalp, hair and hands that you cannot afford to be without them. Besides they meet every want in toilet preparations and are most economical.

Sample each free by mail with Book. Address postcard, Cuticura, Dept. XY, Boston. Sold everywhere.—Adv.

### In the Dentist's Office.

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## Answer the Alarm!

A bad back makes a day's work twice as hard. Backache usually comes from weak kidneys, and if headaches, dizziness or urinary disorders are added, don't wait—get help before dropsy, gravel or Bright's disease set in. Doan's Kidney Pills have brought new life and new strength to thousands of working men and women. Used and recommended the world over.

### An Iowa Case

C. D. Hayes, 122 Avenue B, West, Albion, Iowa, says: "My life was a burden with kidney complaint and I suffered from sharp pains, along with a dull ache. I got little benefit from anything I took until I used Doan's Kidney Pills. Five boxes rid me of the trouble and I haven't suffered much since."

Get Doan's at Any Store, 50c a Box. DOAN'S KIDNEY PILLS. FOSTER-MILBURN CO., BUFFALO, N. Y.

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A Soluble Antiseptic Powder to be dissolved in water as needed For Douches

In the local treatment of woman's ills, such as leucorrhoea and inflammation, hot douches of Paxtine are very efficacious. No woman who has ever used medicated douches will fail to appreciate the clean and healthy condition Paxtine produces and the prompt relief from soreness and discomfort which follows its use. This is because Paxtine possesses superior cleansing, disinfecting and healing properties. For ten years the Lydia E. Pinkham Medicine Co. has recommended Paxtine in their private correspondence with women, which proves its superiority. Women who have been relieved say it is "worth its weight in gold." At drugists, 50c. large box or by mail for 50c. free. The Paxton Toilet Co., Boston, Mass.

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Prompt Relief—Permanent Cure

CARTER'S LITTLE LIVER PILLS never fail. Purely vegetable—act surely but gently on the liver. Stop after dinner distress—cure indigestion, improve the complexion, brighten the eyes. SMALL PILL, SMALL DOSE, SMALL PRICE. Genuine must bear Signature.

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PARKER'S HAIR BALM. A toilet preparation of merit. Helps in washing and drying. For Restoring Color and Beauty to Gray or Faded Hair. 50c. and \$1.00 a bottle.